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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,514	06/28/2000	Li Gong	83000.930C/P2136/AES	1326

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EXAMINER

MEISLAHN, DOUGLAS J

ART UNIT

PAPER NUMBER

2132

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/607,514

Applicant(s)

GONG, LI

Examiner

Douglas J. Meislahn

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment filed 04 August 2003 that amended claims 1-22, 26 and 28.

Response to Arguments

2. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Priority

3. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification of in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

Claim Objections

4. Claim 1 is objected to because of the following informalities: the preamble needs "A" at its beginning. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7, 11-17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin (5893077) in view of Schneier (*Applied Cryptography*).

In figure 9, Griffin shows the serialization of an object (element 387). This meets the limitation of taking a snapshot by serializing the state of a live object. The object has necessarily been instantiated in a runtime environment. Griffin does not say that a signature is associated with the serialized object or that the association between the two is maintained. On page 39, Schneier shows a digital signature that is made by encrypting a message-to-be-authenticated with a private key. Decryption using the corresponding public key not only retrieves the data, but also indicates that the data was encrypted by the private key's holder. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the serialized object of Griffin to generate the signature so that the signature could be used as a proof against the object.

With respect to claim 2, Schneier's signature method includes verification. Deserialization, shown in element 508 of figure 11A in Griffin, meets the limitation of constructing a new object using said snapshot. The snapshot is stored in an event object file that reads on applicant's another object, and claim 3 is thus rendered obvious. Claim 4 is obvious because signatures such as those described by Schneier are not valid with objects that have been altered after signing. Claim 5 is rendered obvious by Schneier's teaching of signing data. Claims six and seven are obvious

Art Unit: 2132

because multiple signatures give multiple levels of security. Claims 11-17 are computer code to perform the method of claims 1-7 and is rendered obvious for largely the same reasons.

7. Claims 23-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin and Schneier as applied to claims 1-4 above, and further in view of Fischer.

Griffin and Schneier teach serializing and storing objects along with signatures that authenticate the serialized objects. They do not say that the program code that performs these functions is an object. In lines 40-50 of column 2, Fischer teaches the advantage of object-oriented programming, saying that it is polymorphic. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement modules to reap the rewards of polymorphism. At some point this would require the snapshot and signature to be stored within the processing object.

8. Claims 8-10 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin and Schneier as applied to claims 1 and 11 and further in view of Chaplin (5315655).

Griffin and Schneier display a system of signing serialized objects. Schneier teaches encryption of data as a way to protect it on page 28. Encryption keys are inherently generated prior to encryption. They do not say that the leftover unencrypted objects are deleted. Figure 7 of Chaplin clearly shows the encryption of data in part 704 and then the deletion of the unencrypted copy of the data in part 705. Chaplin also teaches decryption of data in figure 8. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to delete

Art Unit: 2132

unencrypted copies of the objects after the objects had been encrypted. Unencrypted copies could otherwise be used to circumvent the protection provided by the encryption.

9. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin in view of Fischer and Schneier as applied to claim 22 above, and further in view of Chaplin.

Griffin in view of Fischer and Schneier shows a system of signing only the critical objects that make up a larger object where the signature is made from the critical objects. As shown by element 114 of figure 10, Fischer's system can encrypt the cells and the digital signatures. Schneier also teaches encryption on page 28. Encryption keys are inherently generated prior to encryption. Fischer does not say that the leftover unencrypted objects are deleted. Figure 7 of Chaplin clearly shows the encryption of data in part 704 and then the deletion of the unencrypted copy of the data in part 705. Chaplin also teaches decryption of data in figure 8. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to delete unencrypted copies of the critical objects after the objects had been encrypted. Unencrypted copies could otherwise be used to circumvent the protection provided by the encryption.

Conclusion

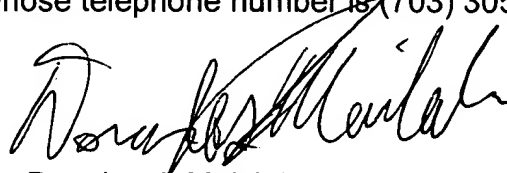
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Burgess (5652888) – paragraph spanning columns 10 and 11; Murray (5944781) – not prior art because of common assignment, paragraph bridging columns 5 and 6; Atkinson et al. (5581760).

. Art Unit: 2132

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached on between 9 AM and 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barrón can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

A handwritten signature in black ink, appearing to read 'Douglas J. Meislahn', is written over the printed name and title.

Douglas J. Meislahn
Examiner
Art Unit 2132

DJM